

Notice of Allowability

Application No.

10/723,096

Examiner

Mark Eashoo, Ph.D.

Applicant(s)

KENDALL ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the papers filed 10-24-2006.
2. ☒ The allowed claim(s) is/are 24-46.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>01/07</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

The application has been amended as follows:

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with applicant's attorney, Mr. Scott Chapple, on 11-JAN-2007.

Claim 24 (amended): A method of molding a sheet molding compound, the method comprising:

combining a macrocyclic oligoester and a reactive compound with a transesterification catalyst thereby forming a reactive admixture wherein the reactive compound is selected from another macrocyclic oligoester or a secondary compound;

combining the reactive admixture with a reinforcement material to form the sheet molding compound; and

molding the sheet molding compound at an elevated temperature, the reactive compound thereby forming a cross-linked matrix within the sheet molding compound, and wherein the macrocyclic oligoester reacts with the reactive compound in the presence of the transesterification catalyst to produce polymer chains and the polymer chains are integrated into the cross-linked matrix ~~and~~ wherein, either:

- i) the polymer chains are formed separately from the cross-linked matrix;
- or
- ii) a linking agent couples the polymer chains together in the matrix and the linking agent is a multi-functional linking agent selected from a diepoxide, a diisocyanate, a diester or a combination thereof.

Claim 27 (amended): A method as in claim 24 wherein the polymer chains are formed separately from the cross-linked matrix and wherein styrene, methyl methacrylate and a vinyl ester resin are copolymerized to produce the cross linked matrix.

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Claim 38 (amended): A method of molding a sheet molding compound, the method comprising:

combining a macrocyclic oligoester and a reactive compound with a transesterification catalyst thereby forming a reactive admixture wherein the reactive compound is selected from another macrocyclic oligoester or a secondary compound and the macrocyclic oligoester is a cyclic butylene terephthalate;

combining the reactive admixture with a reinforcement material to form the sheet molding compound; and

molding the sheet molding compound at an elevated temperature, the reactive compound thereby forming a cross-linked matrix within the sheet molding compound, and wherein the macrocyclic oligoester reacts with the reactive compound in the presence of the transesterification catalyst to produce polymer chains and the polymer chains are integrated into the cross-linked matrix ~~and~~ wherein a linking agent couples the polymer chains together in the matrix and the linking agent is a multi-functional linking agent selected from a diepoxide, a diisocyanate, a diester or a combination thereof.

Claim 45 (amended): A method of molding a sheet molding compound, the method comprising:

combining a macrocyclic oligoester and a reactive compound with a transesterification catalyst thereby forming a reactive admixture wherein the reactive compound is selected from another macrocyclic oligoester or a secondary compound and the macrocyclic oligoester is a cyclic butylene terephthalate having a molecular weight of between 500 and 100,000;

combining the reactive admixture with a reinforcement material to form the sheet molding compound wherein the reinforcement material;

combining a filler with the reactive admixture wherein the filler and the reinforcement material represent at least about 50% by weight of the sheet molding compound wherein the filler is calcium carbonate and wherein the macrocyclic oligoester, the secondary compound or both are present in the sheet molding compound in an amount between about 1% and about 30% by weight; and

molding the sheet molding compound at an elevated temperature, the reactive compound thereby forming a cross-linked matrix within the sheet molding compound, and wherein the macrocyclic oligoester reacts with the reactive compound in the presence of the transesterification catalyst to produce polymer chains and the polymer chains are integrated into the cross-linked matrix ~~and~~ wherein a linking agent couples the polymer chains together in the matrix and the linking agent is a

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multi-functional linking agent selected from a diepoxide, a diisocyanate, a diester or a combination thereof.

The following is an examiner's statement of reasons for allowance:

The prior art of record does not teach or suggest the instant claims with respect to a marcocyclic oligoester being polymerized in a sheet molding compound wherein during the polymerization of the marcocyclic oligoester, a reactive compound forms a cross-linked matrix, such that the cross-linked matrix is separate from the cross-linked matrix or a linking agent couples the polymer formed from the marcocyclic oligoester with the cross-linked matrix.

Support for the above examiner's amendment can be substantially found in the original specification in paras. 33-34 of US 2004/0155380 A1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Eashoo, Ph.D. whose telephone number is (571) 272-1197. The examiner can normally be reached on 7am-3pm EST, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA), or 571-272-1000.



Mark Eashoo, Ph.D.
Primary Examiner
Art Unit 1732

11 / Jan / 07

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11-Jan-07